

AMENDMENTS TO THE CLAIMS

1. (Previously Presented) A method for use in allocating subcarriers in an OFDMA system comprising
allocating at least one diversity cluster of subcarriers to a first subscriber; and
allocating at least one coherence cluster to a second subscriber, such that
communication with the first and second subscribers is able to occur by simultaneously using
the at least one diversity cluster and the at least one coherence cluster, respectively.
2. (Original) The method defined in Claim 1 wherein the first subscriber comprises a mobile subscriber and the second subscriber comprises a fixed subscriber.
3. (Original) The method defined in Claim 1 wherein the first subscriber comprises a fixed subscriber located at a cell edge.
4. (Original) The method defined in Claim 1 further comprising transmitting information using one diversity cluster while performing frequency hopping.
5. (Original) The method defined in Claim 1 wherein using one diversity cluster includes channel coding across subcarriers of the one diversity cluster.
6. (Original) The method defined in Claim 1 further comprising transmitting codewords in which each codeword contains bits transmitted from multiple subcarriers and with difference bits between codewords being distributed among multiple subcarriers.
7. (Original) The method defined in Claim 1 wherein subcarriers of one coherence cluster are within the coherent bandwidth of a channel between a base station and a subscriber.
8. (Original) The method defined in Claim 1 further comprising updating allocation of clusters to the subscriber.
9. (Original) The method defined in Claim 1 further comprising reconfiguring cluster classification when population of mobile and fixed subscribers in a cell changes.

10. (Original) The method defined in Claim 1 wherein the at least one diversity cluster is configured to reduce the effect of inter-cell interference.

11– 47. (Canceled)

48. (Previously Presented) The method defined in Claim 1 further comprising determining characteristics of the first subscriber and the second subscriber, wherein allocating the at least one diversity cluster of subcarriers to the first subscriber and allocating the at least one coherence cluster to the second subscriber are based on determined characteristics of the first and second subscribers.

49. (Previously Presented) The method defined in Claim 48 wherein the characteristics comprise whether the first and second subscribers are fixed or mobile subscribers.

50. (Previously Presented) The method defined in Claim 1 further comprising adaptively switching allocation of clusters to either the first or second subscriber so that the first subscriber is allocated at least one coherence cluster of subcarriers or the second subscriber is allocated at least one diversity cluster of subscribers based on channel conditions and subscriber characteristics.